

RETRACTABLE LIFTING BLADES FOR AIRCRAFT**ABSTRACT**

A rotor blade assembly for providing vertical lift to an aircraft, having a rotor head and a plurality of blades, with each blade attached to a mechanism such as a cam surface, whereby movement of the mechanism causes the radial distance between the distal tip of the attached blade and the center of the rotor head to alter, decreasing or increasing the length of the lifting surface. The blades are moved from a fully extended position providing maximum lift, to a retracted position in which the blades are removed from the airstream. The pitch of the blades may be controlled to achieve full helicopter responsiveness. A plurality of bladelets may be positioned near the outer periphery of the rotor head. When they are moved into the airstream, passing air impacts the bladelets exerting a pressure, causing rotational movement of the rotor blade assembly.